

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

Claim 1 (Original): A method for providing security, comprising:

separating a plurality of classes into at least a first trusted class and an untrusted class;
associating privilege information with the first trusted class; and
controlling access to the first trusted class by the untrusted class or a second trusted class
based upon the privilege information associated with the first trusted class.

Claim 2 (Original): The method of claim 1 further comprising:

granting the untrusted class or the second trusted class a privilege related to the first
trusted class based upon a permissive attribute of the privilege information; and
wherein the step of controlling access depends upon the privilege.

Claim 3 (Original): The method of claim 1 further comprising:

refusing to grant the untrusted class or second trusted class a privilege related to the first
trusted class based upon a permissive attribute of the privilege information; and
wherein controlling access depends upon the privilege.

Claim 4 (Original): The method of claim 2, wherein controlling access further comprises:

determining if the privilege allows the untrusted class or second trusted class to interact
with the first trusted class in a predefined manner; and
permitting the access to the first trusted class in the predefined manner if the privilege
permits the access.

Claim 5 (Original): The method of claim 4 further comprising denying the access to the first
trusted class in the predefined manner if the access to the first trusted class in the
predefined manner is contrary to the privilege.

Claim 6 (Original): The method of claim 5, wherein the privilege allows at least one of the
group of creating a subclass of the first trusted class, creating a new instance of the first
trusted class, allowing the untrusted class or second trusted class to invoke a method of
the first trusted class, and allowing the untrusted class or second trusted class access to
trusted data of the first trusted class.

Claim 7 (Original): The method of claim 1, wherein the step of separating the classes further

- comprises associating a package with the first trusted class.
- Claim 8 (Original): The method of claim 7, wherein associating the package further comprises encapsulating the first trusted class within the package.
- Claim 9 (Original): The method of claim 7, wherein the package further comprises:
- a key;
 - a package name incorporating the key;
 - the privilege information; and
 - the first trusted class.
- Claim 10 (Original): The method of claim 1, wherein the step of separating the classes further comprises allocating a separate memory space for the first trusted class and the untrusted class.
- Claim 11 (Original): The method of claim 1, wherein the privilege information further comprises a plurality of permissive attributes.
- Claim 12 (Original): The method of claim 11, wherein the permissive attributes comprises at least one of the group of a subclass attribute, a new instance attribute, a method invocation attribute, and a trusted data access attribute.
- Claim 13 (Original): A method of claim 11 further comprising setting the permissive attribute to indicate a privilege grant to the untrusted class or second trusted class.
- Claim 14 (Original): The method of claim 11, wherein a default for the permissive attribute indicates no privilege grant to the untrusted class or second trusted class.
- Claim 15 (Original): The method of claim 1, wherein controlling access to the first trusted class further comprises:
- detecting when a request for a trusted class operation is made by the untrusted class or second trusted class;
 - determining that the trusted class operation is authorized based on the privilege information associated with the first trusted class; and
 - allowing access to the first trusted class according to the trusted class operation.
- Claim 16 (Original): The method of claim 15, wherein the trusted class operation is at least one of a group of operations comprising a subclass operation, a new instance creation, a method call operation, and a trusted data access operation.
- Claim 17 (Original): A method of claim 15, wherein the step of determining further comprises

determining that the trusted class operation is authorized based on the setting for at least one permissive attribute within the privilege information.

Claim 18 (Original): A secure virtual machine instruction processor comprising:

a first memory space for storing an untrusted class;

a second memory space for storing a first trusted class;

a privilege manager for managing privilege information associated with the first trusted class; and

a controller for controlling access to the first trusted class during a trusted class operation, wherein the controller is operative to receive a request for the trusted class operation from the untrusted class or a second trusted class and grant access to the first trusted class based on at least one permissive attribute within the privilege information for the first trusted class.

Claim 19 (Original): A processor of claim 18, wherein the request received by the controller is one of the group of a subclass attribute, a new instance attribute, a method invocation attribute, and a trusted data access attribute.

Claim 20 (Original): A processor of claim 18, wherein the controller is further operative to permit access to the first trusted class in a predefined manner if the privilege permits the access.

Claim 21 (Original): A processor of claim 18, wherein the controller is further operative to deny access to the first trusted class in a predefined manner if the privilege is contrary to the privilege.

Claim 22 (Original): A processor of claim 18, wherein the first trusted class of the second memory space is associated with a package.

Claim 23 (Original): A processor of claim 22, wherein associating the package further comprises encapsulating the first trusted class within the package.

Claim 24 (Original): A processor of claim 22, wherein the package further comprises:

a key;

a package name incorporating the key;

the privilege information; and

the first trusted class.

Claim 25 (Original): A computer-readable medium on which is stored instructions, which when

executed perform steps in a method for providing a secure virtual machine, the steps comprising:
separating a plurality of classes into at least a first trusted class and an untrusted class;
associating privilege information with the first trusted class; and
controlling access to the first trusted class by the untrusted class or a second trusted class based upon the privilege information associated with the first trusted class.

Claim 26 (Original): The computer-readable medium of claim 25 further comprising:
refusing to grant the untrusted class or second trusted class a privilege related to the first trusted class based upon a permissive attribute of the privilege information; and
wherein the step of controlling access depends upon the privilege.

Claim 27 (Original): The computer-readable medium of claim 25 further comprising:
granting the untrusted class or second trusted class a privilege related to the first trusted class based upon a permissive attribute of the privilege information; and
wherein the step of controlling access depends upon the privilege.

Claim 28 (Original): The computer-readable medium of claim 25 further comprising denying the access to the first trusted class in the predefined manner if the access to the first trusted class in the predefined manner is contrary to the privilege information.

Claim 29 (Original): The computer-readable medium of claim 28 wherein the privilege information allows at least one of the group of creating a subclass of the first trusted class, creating a new instance of the first trusted class, allowing the untrusted class or second trusted class to invoke a method of the first trusted class, and allowing the untrusted class or second trusted class access to trusted data of the first trusted class.